



## Missile Misfires

### Why in News?

Recently, **India acknowledged** that “technical malfunction led to the **accidental firing of a missile**” **which landed 124 km inside Pakistan's territory.**

- It was speculated that it was a test of one of India’s top missiles, **BrahMos**, jointly developed with Russia.

### What are the Provisions for Testing Missiles?

- Under the pre-notification of flight testing of **ballistic missiles agreement signed in 2005**, each country **must provide the other an advance notification on the flight test** it intends to take for any land or sea launched, **surface-to-surface ballistic missile.**
- Before the test, the country must issue **Notice to Air Missions (NOTAM) or Navigational Warning (NAVAREA)** to alert aviation pilots and seafarers, respectively.
- Also, the **testing country must ensure that the launch site is not within 40 km**, and the planned impact area is not within **75 km of either the International Boundary (IB) or the [Line of Control \(LoC\).](#)**
  - The planned trajectory **should not cross the IB or the LoC** and **must maintain a horizontal distance** of at least 40 km from the border.
- The **testing country must notify the other nation “no less than three days** in advance of the commencement of a five day launch window within which it intends to undertake flight tests of any land or sea launched, surface-to-surface ballistic missile”.
  - The pre-notification has to be **“conveyed through the respective Foreign Offices and the High Commissions”.**

PYQ

In the context of Indian defence, consider the following statements: (2009)

1. The Shourya missile flies with a speed of more than 8 Mach.
2. The range of Shourya missile is more than 1600 km.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (d)

## What is Notice to Air Missions ( NOTAMs )?

- A NOTAM is a **notice containing information essential to personnel concerned** with flight operations but not known far enough in advance to be publicized by other means.

## What is a Navigational Warning Service (WWNWS)?

- The World Wide Navigational Warning Service (WWNWS) was **established in 1977 for the promulgation of information** on worldwide hazards to navigation for international shipping.
- Navigational warnings **provide early information of important incidents** which may constitute a danger to navigation.
- Many navigational warnings are of a **temporary nature, but others remain in force for several weeks** and may be succeeded by Notice to Mariners (NMs).

PYQ

In the context of the Indian defence, what is 'Dhruv'? (2008)

- (a) Aircraft-carrying warship
- (b) Missile-carrying submarine
- (c) Advanced light helicopter
- (d) Intercontinental ballistic missile

Ans: (c)

## What is Brahmos Missile?

- BrahMos is a joint venture between the [Defence Research and Development Organisation of India \(DRDO\)](#) and the NPOM of Russia.
  - BrahMos is named on the rivers **Brahmaputra and Moskva**.
- It is a **two-stage** (solid propellant engine in the first stage and liquid ramjet in second) missile.
- It is a **multiplatform missile** i.e it can be launched from land, air, and sea and multi capability missile with pinpoint accuracy that works in both day and night irrespective of the weather conditions.
- It operates on the "**Fire and Forgets**" principle i.e it does not require further guidance after launch.
- Brahmos is one of the **fastest cruise missile** currently operationally deployed with speed of Mach 2.8, which is nearly 3 times more than the speed of sound.

PYQ

With reference to Agni-IV Missile, which of the following statements is/are correct? (2014)

1. It is a surface-to-surface missile.
2. It is fuelled by liquid propellant only.
3. It can deliver one-tonne nuclear warheads about 7500 km away.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (a)

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